BIOENGINEERING OPEN HOUSE

University of Illinois,   Urbana-Champaign

MARCH 7 and 8, 1980

Rooms 168, 169 and 170
Electrical Engineering Building

Sponsored by the Bioengineering Society

BIOENGINEERING SOCIETY ENGINEERING OPEN HOUSE EXHIBITS

Room 168

1. **Hospital Equipment of the 80's** – Special exhibit demonstrating the latest in bioinstrumentation. Presentation by Dan Klosterman and Jim Cyrier of Hewlett-Packard.

2. **Bioengineering Society** – Information on the student Bioengineering Society and curriculum.

Room 170

3. **The Bionic Man** – See a man made out of man-made parts. (Steve Bruch, Janet Dmitrovich)

4. **Voice of the 80's: Artificial Human Speech** – A biological process generated by a computer; an outline of the electronics and possible applications (Bob Callaway, Don Novotny)

5. **A Day in the Life of a Biomedical Engineer** – A display of hospital equipment and their use and relationship to a biomedical engineer. (Debbie Mrazek)

6. **Canoeing the Whitecaps of Your Bone** – Wet bone exhibits an electrical potential which is believed to be caused by ion movement. Knowledge of this "Streaming Potential" is an important step in developing new medical therapies.

7. **Bone Power** – The cantilever bending of dry bone produces small, electrical signals known as piezoelectricity; induced signals are clinically used in the healing of bones. (Tim Hinterberger, John Michon)

Room 169

8. **An Un-Nerving Experience: There's Action in THIS Potential!** – A look at the important parameters involved in transmitting information in your nervous system, and the engineering genius behind their measurements. (Bob Parish)

9. **The EKG – What is it?/How is it Obtained?** – Learn the physiology of the cardiac cycle and the engineering involved in non-invasively studying the condition of the human heart. (Charlie Edwards)

10. **Heartbeat Goes Digital** – Seeing is believing! Your heart rate is displayed digitally while you listen to its rhythmic beat. (Mike Martise, Jim Neifing, Steve Vaughn)

11. **It all Started with Hippocrates** – The birth and growth of the stethoscope; how it works and its implications. (Deanna Daniel)

12. **A Breath of Life; YOUR Lung Capacity** – Measure your respiration rate while sitting, reclining and exercising. Your lung capacity is important to that vital breath of life. (Lynn Farley, Diane Zimmerman)

13. **Computer-Aided Motion and Shape Analysis** – A system that allows scientific data to be recorded on film and then extracted by computer for analysis. A current system, Galatea, is used to obtain films of aggregating slime mold cells. (Tracey Narel)

14. **An Alternative Imaging System: Acoustic Microscopy** – Sound waves at 100 MHz are utilized in examining acoustic properties of biological tissue on the microscopic level. Come and see real-time acoustic imaging of fetal heart motion. (Gale Bright, Amy Levin)

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The Future of Bioengineering – Numerous areas of Bioengineering are looked at in this view of the future. This display is in the lobby of Loomis Lab (Goodwin and Green), courtesy of Phil Bierman.

OUR THANKS TO:

American Limb and Orthopedic of Urbana, Inc.
Carle Clinic
Hewlett-Packard
Mercy Hospital
University Orthopedics
Dr. Shirley McCluer
Hazel Lee
Bioengineering Faculty

SITE GUIDE:

Gene Portelli

BIOENGINEERING SOCIETY OFFICERS

Karen Gallaher - President
Andrea Mravca - Vice President; Open House Chairman
Jeff Gindorf - Program Chairman
Gene Portelli - Membership Chairman; Open House Co-Chairman
Linda Contos - Treasurer
Diane Zimmerman - Secretary
Deanna Daniel - Engineering Council Representative
Harold Stone - Engineering Council Representative
Charlie Edwards - Graduate Advisor; Open House Project Advisor
Prof. William O'Brien - Faculty Advisor

We hope you have enjoyed our Bioegineering Open House exhibits.
If you have any questions, please feel free to write or call:

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Thank you,

Andrea Mravca

Andrea Mravca
Bioengineering Open House
Chairman